



The Arboretum Bulletin



VOL. IV, No. 2

SEATTLE, WASHINGTON

FEBRUARY, 1941

Special Course in Gardening

THE program for the two-day course in gardening that will be held on Friday and Saturday, March 14 and 15, 1941, at the University of Washington, has been completed. As was the case last year the sessions have been arranged under the joint sponsorship of the University Extension Service and the Arboretum. We have attempted to arrange the topics and provide speakers so that there would be a minimum of repetition both in subject matter and voice. We feel certain that the schedule will appeal to the many ardent gardeners of the Northwest and that the entire program will be interesting and instructive to everyone. The registration fee for the complete series is \$1.50, as it was a year ago. Following is the tabulation of the speakers and their topics:

Friday, March 14, 1941

9:00 A.M.—Annuals for the Garden. Illustrated. Dr. John H. Hanley, Director, University of Washington Arboretum.

10:00 A.M.—Attractive Native Alpines of North America. Illustrated in color. Dr. C. L. Hitchcock, Department of Botany, University of Washington.

Dr. Hitchcock has, for a number of years, led botanical expeditions throughout western and southwestern United States and into Mexico. In the course of these travels he has made Kodachrome pictures of hundreds of fine, rare native alpines. These he will show and discuss.

11:00 A.M.—Rare or Otherwise Noteworthy Ornamental Plants. Mr. Donald G. Graham, Seattle.

In the course of the past ten years, Mr. Graham has collected and grown a wide range of beautiful, outstanding, flowering shrubs and trees. He will tell about his experiences with his many finerhododendrons, camellias and the like and will show natural color pictures of many of them.

2:00 P.M.—A Detailed Discussion of Lawns and Lawn Problems. Mr. Cecil Solly.

Mr. Solly needs no introduction to the men and women gardeners of the Northwest. His long experience in every branch of gardening has given him a breadth of knowledge that is seldom encountered. We hope that all of you will bring in questions on lawns and lawn care.

4:00 P.M.—Announcements.

7:30 P.M.—Plant Hunters in the Andes. Dr. T. Harper Goodspeed, Professor of Botany and Director of the Botanical Garden, University of California, Berkeley, California.

A lecture with 2,400 feet of moving pictures, in natural color, illustrating the experiences of a party of plant hunters from California on a 25,000-mile journey by air, sea and land in the highlands of Peru, Bolivia, Argentina and Chile.

Dr. Goodspeed, Director of the University of California Botanical Garden, led two expeditions which operated along both the eastern and western flanks of the Andes from the Equator to Cape Horn, and on which fifteen scientists and assistants searched for new plants of scientific and of ornamental value. He has recently returned from the second expedition, which spent over ten months in South America.

This motion picture, entirely in natural color, shows brilliantly and clearly the landscape, vegetation, peoples and customs of the Andes, and life among the Peruvian Indians and on the great Chilean haciendas. The magnificent ruins left by the Andean Incas; the jungle-covered sources of the Amazon River; the top of the world in South America culminating in Mt. Aconcagua, whose 23,000-foot peak is the highest on the American continent; the effects of the great Chilean earthquake of January, 1939, are seen in natural color. The trip took Dr. Goodspeed and his plant hunters with their cameras through the highest Andes from Peru to the Switzerland of South America in Southern Chile, along the deserts of the West Coast and many other remote areas in Western South America. This is an illustrated lecture that all of you will want to see.

Saturday, March 15, 1941

9:00 A.M.—Demonstrations of Plant Propagation Practices.

These demonstrations will be exhibited as a series of displays of work done by students in the class in plant propagation and culture. The students will be on hand to explain the various procedures to those who are interested. No formal discussion.

10:30 A.M.—Outstanding Heathers for Your Garden. Mr. Arthur Dome, Medina.

Mr. Dome has one of the finest collections of heathers to be found anywhere in the Northwest. He will discuss the many types, their growth requirements and the ways of using and propagating them.

11:30 A.M.—The Eucalyptus in the Puget Sound Region. Mr. Duane O. Crummett, superintendent of greenhouses, University of Washington Arboretum.

Mr. Crummett, as a result of his long experience as a plantsman in California, is well qualified to talk on the Eucalyptus. He will discuss the several kinds which are already growing here and will introduce you to other types which have definite possibilities.

2:00 P.M.—Lilies for the Northwest. Mr. Gordon Edwards.

Here is a man whom you will all enjoy. He brings a wealth of knowledge that has come through years of successful lily culture and we are happy to be able to present him.

3:00 P.M.—Spraying for Insects and Diseases on Ornamental Plants. Mr. D. J. O'Donnell, inspector, State Department of Horticulture, Olympia, Washington.

Mr. O'Donnell, through his close contact with the horticultural industry, has become a veritable "clearing house" for information on the efficiency of the many different materials that are used in insect and disease control. This is a most important subject to all gardeners. The insect and disease problem seems to become more severe with each ensuing year. Come out and get up-to-date information.

All those who are interested in a fine program that is being operated for the benefit of the Arboretum should send a registration notice to the University Extension Service, 312 Lewis Hall, University of Washington, Seattle, and enclose a check for the registration fee—\$1.50.

1 1 1

Some Useful Definitions

By J. G. SEUPELT

MEMBERSHIP in garden clubs often conduces to enough reading and interest in matters of garden lore as to enable a neophyte to ask intelligent questions. Such distinctions as annual, biennial and perennial, such terms as herbaceous, deciduous, monoecious or dioecious, staminate or pistillate and a large number of other technical terms become part of one's verbal equipment as a gardener. Without such equipment, one might speak of "bushes," not knowing whether the thing spoken of was an annual, a shrub or a tree.

Having read Mrs. Ballard's article on "Arboretum Units" in a recent issue of this bulletin, it seemed to me likely that these units, working more or less like garden clubs, might render themselves even more valuable to their members and to the Arboretum if some attention was focussed on the peculiar purposes of an arboretum as distinguished from a botanical garden or a park.

From a perusal of a list of donations to the Arboretum, I apprehend that the liberality of flower fanciers and specialty growers might easily swamp certain areas that should be available for a large number of genera and species, with a multiplicity of hybrids which, however beautiful, should not be accommodated beyond a permissible maximum.

In agreement with the botanical character of our institution, it would be desirable that the interest of its sponsors should be primarily from the botanical angle. Interest of that kind can be materially increased by a little study of systematic botany, so that that which formerly seem a confusing expanse, like a sea of whitecaps, readily falls into divisions and subdivisions, where each new acquaintance drops into line and order.

For these reasons I desire to give to "my friends" (all budding dendrologists) a few definitions that will prove helpful in seeing characteristics that formerly escaped them while looking at the woods.

Separating of woody plants into groups, such as trees, shrubs and vines, is rendered difficult by the fact that numerous intermediate forms partake of the characteristics of one or another, whatever the definition may be that is adopted for these forms.

A tree may be defined as a one-stemmed, woody plant which branches above the ground, as distinguished from a shrub which rises with *more than one* stem from the ground, one which is capable of multiplying these stems and replacing them from beneath the ground.

Trees differ from one another in their habits with regard to their tendency to form trunks that are straight and more or less free from branches. Some extremely shrub-like trees branch close to the ground without forming any trunk, or not, at least, a straight one. In some cases where these branches are straight and more or less upright, they may appear as so many trunks, but still these are to be recog-

nized for what they are, namely, branches from one original trunk or stem, and since these stems did not severally come from the ground, the plants are plainly distinct from shrubs.

Some forest trees, particularly coniferous ones, are true trees, inasmuch as they partake least of the attributes of a shrub, that is to say, their life is usually ended when their trunks are cut down and the stump decays. In the case of some other trees, particularly deciduous ones, a number of sprouts will develop around the stump which may perpetuate or renew the lease on life of such a tree. This young growth so appearing is called second growth or coppice. Second growth may only develop on some trees from underground parts of the trunk, in which case it is usually found close around the stump, while in the case of others it may develop also from roots that come close to the surface and from roots that have been bruised or severed.

Young growths that arise from roots or from underground parts of stems while the tree is still living are generally called suckers.

The tendency of shrubs to send up sprouts is called stooling. Stools and suckers are quite distinct from one another, in that the former usually have well developed roots of their own, by means of which circumstance a mode of propagation, called stooling, is carried on, while suckers, even where they arise from heavy roots, seldom bear any fiber roots, hence are not useful for propagation.

To make a distinction of size between the concept of a tree and that of a shrub is of no use for purposes of definition, since, even though trees may generally be larger than shrubs, there are so many exceptions that no general rule is applicable. Large shrubs are sometimes made (pruned up) into trees by selecting a central, straight and upright stem and removing all others. Also trees are made shrub-like by repeated and severe pruning of the top growth, which results in a corresponding encouragement of the growth of the lower, more slanting or inclining branches. These thereby are thrown into competition with one another and the development of a leader or main trunk is made impossible thereby, or at least so long as pruning is continued.

So, while a woody plant may have the aspect of a tree, or that of a shrub, its form may have been imposed upon it and be contrary to its natural form. Hence, from the standpoint of the dendrologist, it may be said that, for instance, this is a treelike shrub (but not a tree), and that is a shrublike tree (but not a shrub). Moreover, transformations of woody plants from one type (or growth habit) to another are not alone caused by man but may also occur in the out-of-doors and are there induced by a wide variety of agencies, such as browsing animals, lightning, steady winds, rushing water, frosts in early fall or late spring, denudation of foliage by insects, draught, fire or by high water.

All these vicissitudes and others leave an imprint which is intelligible to the experienced observer who, because of the form and despite the deformation, can unfailingly describe the thing seen, either as shrub or tree or vine, or as shrublike tree or as a treelike shrub.

Another factor that influences the growth habits may be said to reside in all those conditions that affect the physical well-being, at least insofar as these have to do with the density of the stand—that is whether a given area is occupied by ten or by ten thousand individuals.

A classical example is *pseudotsuga taxifolia*, the well-known Douglas Fir, which requires a dense stand if it is to develop into the valuable, straight trunked and mighty forest tree we know. Isolated, it proves a very indifferent grower and frequently develops the most tortuous monstrosities to be found among trees.

Pinus ponderosa, the yellow pine, when grown in a thin stand is likely to have rather short trunk and heavy, long

and widely ramified branches. This is what the forester calls a "wolf tree," one that occupies a large space but is unprofitable to be left standing, since its increase would spell cordwood only, not lumber.

Density of stand not only changes tree types but it also changes shrubs of varying heights into tall shrubs and causes them sometimes to assume vining habits. Thus *Rhus toxicodendron*, when it grows in the open is known as "Poison Oak," whereas when found in the forest where it has become a vine, it is called "Poison Ivy."

1 1 1

New Annuals for 1941

By JOHN H. HANLEY

(Continued From January)

THE new flowers for 1941 include several marigolds. Most of you know and use the popular variety called Harmony which appeared several years ago as an All-American selection. Subsequently, a dwarf Harmony was introduced and now comes a big improvement on the latter type—a new, improved dwarf Harmony that is called Spry. Nine inches tall, compact, regular and covered with flowers that are a rich maroon on the outer petals and, surmounting these, a crest of bright, light orange—that is Spry and it is a type that you will find very satisfactory for low bedding or for edging. Its compactness gives it added value for formal usage.

Do you remember the Dixie Sunshine marigold? There is another variety in the 1941 novelties that is of the Dixie type—a large-flowered, fully double, strong-stemmed and free-blooming. This chrysanthemum-flowered class has become very popular with a great number of gardeners for cutting purposes as well as for massed bedding effects. The new variety, Goldsmith, is a stronger color than Dixie Sunshine—a golden orange—and this, coupled with its early and free-blooming habit makes it the more desirable. A third new marigold, called Scarlet Glow, is also a newcomer. It is dwarf, double variety and is the richest red so far found in this popular flower family.

The old time botanists were interesting people. They roamed our land in the early days, picking up a new plant here and a new plant there and many of the best native species they discovered found their way immediately into the gardens of old England. Through most of the 18th century our new world plants were very popular abroad and quite often the early American botanists financed their trips and travels by selling and shipping to prominent Englishmen the many kinds of plants that grew here. One of them placed himself in the employ of the King of England himself and contracted to find and send the best of the North American kinds to him. One often gets the feeling that even today the foreign plantsmen are more appreciative of many of our fine natives than we are ourselves. But there was one species of annual flower that was found down in Texas in those early times by the famous botanist, Drummond, that has since come to occupy a prominent place in gardens throughout our land. It is a species of annual phlox that bears the name of its discoverer. It is called Phlox Drummondii and from it has sprung a long line of showy, reliable garden flowers. This year another beautiful variety of the annual phlox is making its appearance. It is the variety Rosy Morn and was one of the best of last summer's trials. The plant itself is sturdy, a fine grower, and the flowers are brilliant rose in color with a big, creamy-white eye. It is

one of the new gigantea, or very large-flowered class, with big trusses of showy flowers. Its height, over all, is about one foot.

These annual phloxes are adaptable to a wide variety of conditions although personal observations have led us to believe that they develop best in regions where the night temperatures, at least in the early part of the summer, are definitely cool. However, even in sections where the temperature stays high at night, the gardener can get good growth on the annual phloxes by getting them started early. You should also keep in mind that they do not like transplanting. In other words, your best bet is to sow the seeds right where you want the plants to grow in the garden, if you plan to sow them outdoors. But pot-grown stock, planted out of 2-inch or 2 and one-quarter inch pots early in the season before the small plants have had a chance to become root-bound, will give by far the best results in those regions where the summer season is hot.

Before we conclude our presentation of the new annual flowers for 1941 we should make mention of four more varieties. Hardly a year passes without the introduction of one or more new kinds of zinnias, and this year is no exception. Here is a thoroughly capable and adjustable group of plants that is the very backbone of many cutting gardens and annual beds during the latter part of the growing season. Their bright colors, their ability to grow beautifully in any decent garden soil, the sturdiness of their stems and their ability to keep for a long time as cut flowers—all these qualities, and many more, have endeared the zinnia to the vast majority of gardeners. Recalling the developments and changes that have appeared among zinnias within the past 10 or 15 years will convince you that these fine plants are still enjoying their share of popularity. New species, new flower types and new colors have appeared periodically to keep the zinnia thoroughly abreast of the times. The Fantasy type, Dixie Sunshine, and the linearis and haagiana strains have contributed to its versatility and all-around value. And now 1941 brings still another variation in the form of the variety Black Ruby. It is one of the small-flowered forms of the lilliput or pompom class, grows to a height of about 18 inches and produces quantities of flowers on long stems that are excellent for cutting. The color, a deep velvety maroon, was very popular with trial garden visitors; it makes a fine contrast when used with lighter colored varieties and should come about 95 per cent true to the deep maroon color.

We have already mentioned two of the new petunias. There are two more which deserve comment. One is the variety, First Lady, and the second is called Violet Gem. First Lady is of the dwarf type; strong, erect and extremely prolific with its light pink, single flowers. The flowers are larger than Radiance, Celestial Rose, and others of the same type, about 2 and one-half inches across, and appear larger because of their light color. It is not the lightest, but it is the purest pink among the petunias—all in all a free-blooming and delightful form that is doubly welcome because it furnishes a long-desired color. Velvet Gem is a very small type, just a ball of a plant about 6 inches tall and very compact. It is a miniature type that is loaded with small, 1 and one-half-inch, bluntly star-shaped violet-blue, single flowers. Use it for edging, in low beds or as a pot plant.

The fourth and last variety is a pure white scabiosa called Peace, a counterpart of the popular Heavenly Blue. Of medium height, it forms a regular, bushy crown that is covered with fully double bee-hive shaped, pure white flowers. It is a fine addition to the white annual class.

RETURN POSTAGE GUARANTEED

THE ARBORETUM BULLETIN
Published by the
Arboretum Foundation, 5532 White Building
SEATTLE

Sec. 562 P. L. & R.